

### REMARKS

Applicants have carefully considered this Application in connection with the Examiner's Office Action, and respectfully request reconsideration of this Application in view of the above amendments and the following remarks.

Claims 1-47 are pending in this application.

Claims 1-41 and 47 have been withdrawn as belonging to a non-elected invention.

Claim 42 has been amended to clarify the language in response to the Examiner's rejection. Claims 43, 44, and 46 have been amended to clarify the terms relating to  $\beta$ -lactamases. Support for these amendments are found throughout the specification and in paragraphs [0006] and [0141]-[0144].

Claim 45 has been cancelled.

#### **I. Claim Rejections under 35 USC §112**

A. The Examiner has rejected Claims 42-46 under 35 U.S.C. §112, second paragraph, stating that the claims are indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner has further stated that the phrase "composition...comprising a nucleic acid ligand with SeqID#5" is unclear.

In response, Applicants have amended Claim 42 to use the phrase "a composition...comprising a nucleic acid ligand, wherein the sequence of the nucleic acid ligand is SeqID#5." Applicants believe that Claims 42-44, and 46, as amended, are definite. Claim 45 has been cancelled.

B. The Examiner has rejected Claims 42-45 under 35 U.S.C. §112, first paragraph, stating that the specification, while being enabling for a composition comprising SeqID#5 which inhibits B.

*cereus* 5/B/6 metallo- $\beta$ -lactamase, does not reasonably provide enablement for a genus of lactamases. The Examiner states that the claims are therefore not enabled.

As described in paragraph [0006] of the specification, there are several classes of  $\beta$ -lactamase. Class A, C and D  $\beta$ -lactamases are serine-active-site enzymes that resemble serine proteases and form an acyl-enzyme intermediate with an active-site serine during the catalysis of  $\beta$ -lactam antibiotics. The class B  $\beta$ -lactamases are metallo- $\beta$ -lactamases, which require divalent metal ions for enzymatic activity. Native class B  $\beta$ -lactamases are isolated with one or two zinc ions bound to their active sites. The invention is active on the class B  $\beta$ -lactamases (metallo- $\beta$ -lactamases), but not, as the Examiner has pointed out, on the class A  $\beta$ -lactamases *B. cereus* 569/H/9.

In order to emphasize this distinction, Applicants have cancelled Claim 45, and amended Claims 43, 44, and 46, to refer to a metallo- $\beta$ -lactamase, a class B metallo- $\beta$ -lactamase, and a *B. cereus* 5/B/6 metallo- $\beta$ -lactamase, respectively. These accurately reflect increasingly narrow categories of metallo- $\beta$ -lactamase, which are shown to be inhibited by SeqID#5 in paragraphs [0141] – [0144] of the specification. Applicants therefore respectfully submit that Claims 42, and 44-46, as amended are enabled by the specification.

## II. Claim Rejections under 35 USC §102

The Examiner has rejected Claims 42-46 under 35 U.S.C. §102, stating that the claims are anticipated by Stjernschantz et al. (WO 99/02165, “the Stjernschantz Reference”). The Examiner states that the Stjernschantz Reference discloses an oligonucleotide 20-mer (EP2 primary primer) which comprises a 100% homology to that of the instant SEQ ID NO:5, and that the 20-mer comprises the critical region which is responsible for binding and inhibiting *B. cereus* 5/B/6 metallo- $\beta$ -lactamase, and that it would necessarily have the same inhibition activity.

Applicants respectfully disagree with the Examiner’s statement. The Federal Circuit has held in *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed.

Cir. 1987) that "(a) claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." In this case, the current claims recite SeqID#5, which is a single-stranded DNA 10-mer, having unattached nucleotide ends at both the 5' and the 3' ends. The cytosine at position 1 is not bonded to another nucleotide on the 5' end, and the guanine at position 10 is not bonded to another nucleotide at the 3' end. The reference describes a double-stranded 20-mer, wherein the cytosine nucleotide at position 8 is bonded to a thymine at position 7, and the guanine nucleotide at position 17 is bonded to a cytosine at position 18. These additional bonds in the reference constitute a structural difference between the cited art and the current claims. Therefore, the reference cannot be said to anticipate the claims under 35 U.S.C. §102.

### III. Conclusion

Applicants respectfully submit that, in light of the foregoing comments and amendments, all pending claims are now in condition for allowance. A Notice of Allowance is therefore requested.

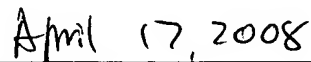
If the Examiner has any other matters which pertain to this Application, the Examiner is encouraged to contact the undersigned to resolve these matters by Examiner's Amendment where possible.

Respectfully submitted,



---

T. Ling Chwang  
Reg. No. 33,590  
Jackson Walker L.L.P.  
901 Main Street, Suite 6000  
Dallas, Texas 75202  
Tel: (214) 953-5758  
Fax: (214) 661-6870



---

Date